QUESTION ITU-R 254/7

Characteristics and spectrum requirements of satellite systems
using nano and pico satellites

(2012)

The ITU Radiocommunication Assembly,

considering

*a)* that nano and pico satellites, commonly described as ranging in mass from 0.1 to 10 kg and measuring less than 0.5 m in any linear dimension excluding deployable antennas and booms, have physical characteristics that differ from those of larger satellites;

*b)* that as with any space station operations, it is important to ensure that operations are under positive control for purposes of avoiding interference, for purposes of any necessary collision avoidance operations, and for purposes of successful mission execution;

*c)* that such satellites are used increasingly, particularly in low Earth orbit, in studies of the Earth, the Earth’s atmosphere, the near Earth space environment, other fields of science, educational activities and many other applications;

*d)* that for some activities, it may be desirable to make simultaneous use of several nano and pico satellites forming a satellite system;

*e)* that to date many of these nano and pico satellites have used spectrum allocated to the meteorological-satellite or the amateur-satellite service;

*f)* that nano and pico satellites for scientific applications may use bands that are allocated to the science services, consistent with those allocations,

decides that the following Questions should be studied

1Whatare the distinctive characteristics of nano and pico satellites and satellite systems in terms of their use of the radio spectrum as defined by data rates, transmissions time and bandwidths?

2 Taking into account such distinctive characteristics, what are the spectrum requirements for nano and pico satellite systems?

3 Under which radiocommunication services can satellite systems using nano and pico satellites operate?

further decides

1 that the results of the above studies should be included in one or more Recommendation(s) and/or Report(s);

2 that the above studies should be completed by 2015.

Category: C2